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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/764,145

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EXAMINER

WOLLSCHLAGER, JEFFREY MICHAEL

ART UNIT

PAPER NUMBER

1732

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DELIVERY MODE

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/764,145	Applicant(s) MORTON-FINGER, JURGEN	
	Examiner Jeff Wollschlager	Art Unit 1732	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 May 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 16-29 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 16-29 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on May 16, 2007 has been entered.

Response to Amendment

Applicant's amendment to the claims filed May 16, 2007 has been entered. Claims 1-15 have been canceled. Claims 16-29 are new.

Claim Objections

Claim 21 is objected to because of the following informalities: the recitation "same sense" would appear to be more properly rendered "same direction". Appropriate correction is required.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 16-18, 21-23, 25, 28 and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tanaka et al. (US 6,409,949) in view of either of Scarlett (US 2,823,421) or Ishikawa (US 5,176,861) and in view of either of Bentivoglio (US 6,153,093) or Rosato

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(Extruding Plastics – A Practical Processing Handbook, 1998) and in view of Hills (US 4,849,113).

Regarding claim 16, Tanaka et al. teach a method of extruding reproduced/recycled PET flakes in a twin-extruder (col. 4, lines 32-35) and degassing the melt in the extruder (col. 4, lines 42-46; col. 6, lines 15, 27-31). Tanaka et al. disclose spinning the melt coming out of the extruder through a die, not limited to palletizing, to make a desired product (Table I; col. 4, lines 47-55; col. 6, lines 42-47), but do not teach extruding the material in strip form to make a packaging web or the recited control scheme relative to the filter. The examiner notes that in one interpretation, reproduced/recycled PET flakes intrinsically contain some degree of contamination/dirt.

However, Scarlett et al. (Figure 1 and Figure 2; col. 1, line 18-col. 2, line 41) teach a method of stretching and cooling extruded PET to produce a packaging film and Ishikawa et al. (Abstract; Figure 1; col. 1, line 14-col. 2, line 67; Example 1) teach a method of extruding a film/sheet of PET from recycled bottles and stretching and cooling the film.

Furthermore, Bentivoglio (Abstract; col. 1, lines 10-16; col. 2, lines 8-67; col. 3, lines 56-64) and Rosato (pages 84-89) each teach extruding resins through a filter, backflushing the contaminants/dirt from the filter in response to differential pressure across the filter which increases the time between complete filter changes. Additionally, Hill discloses as conventional, adjusting extruder speed, as required to account for the increased clogging of a filter downstream of the extruder (col. 13, line 63 – col. 14, lines 44).

Therefore it would have been *prima facie* obvious to one having ordinary skill in the art at the time of the claimed invention to have modified the method disclosed by Tanaka et al. and to have produced a film product as suggested by either of Scarlett or Ishikawa for the purpose of producing a suitable and viable product.

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Further, it would have been *prima facie* obvious to one having ordinary skill in the art at the time of the claimed invention to have employed a backflush filter, as suggested by either of Bentivoglio or Rosato for the purpose of increasing production output and increasing the time between filter changes. Additionally, it would have been *prima facie* obvious to one having ordinary skill in the art at the time of the claimed invention to have adjusted the extruder speed as the filter became plugged, as disclosed as conventional by Hills, for the purpose of maintaining a constant extruder output/output pressure.

As to claim 17, Ishikawa et al. employ PET bottles as a raw material (col. 2, lines 25-28).

As to claim 18, Tanaka et al. teach that the PET is supplied to the extruder with a metering screw (col. 4, lines 40-42).

As to claim 21, Ishikawa et al. disclose a twin extruder rotating in the same direction (col. 2, lines 44-50).

As to claim 22, Tanaka et al. teach connecting a vacuum pump to the extruder-degassing vent (col. 4, lines 42-44).

As to claim 23, Tanaka et al. teach feeding a chain-lengthening substance to the interior of the extruder (col. 6, lines 20-22; col. 4, lines 45-51).

As to claim 25, Tanaka et al. feed the melt to the downstream process with a gear pump (col. 4, lines 50-55).

As to claims 28 and 29, Hills discloses adjusting the extruder speed (col. 14, lines 1-20). Further, it is noted that the feed rate to the extruder would be adjusted/controlled to zero when the screens needed to be ultimately changed after many backflushes (Rosato, pages 84-89)

Claims 19 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tanaka et al. (US 6,409,949) in view of either of Scarlett (US 2,823,421) or Ishikawa (US

5,176,861) and either of Bentivoglio (US 6,153,093) or Rosato (Extrusion Processing) and in view of Hills (US 4,849,113), as applied to claims 16-18, 21-23, 25, 28 and 29 above, and further in view of Bandera et al. (US 6,583,261).

As to claims 19 and 20, the combination teaches the method as set forth above. The combination employs a twin-screw extruder, which are conventionally starve fed, but does not expressly teach the degree the flights are filled. However, Bandera et al. analogously teach that the degree of flight filling impacts the efficiency of venting while extruding PET (Abstract; col. 2, lines 17-65; col. 3, lines 13-17).

Therefore it would have been *prima facie* obvious to one having ordinary skill in the art at the time of the claimed invention to have optimized the degree of flight filling in the method disclosed by Tanaka et al. for the purpose of controlling the extent and effectiveness of the venting since Bandera et al. suggest that the degree of flight filling is a result effective variable for venting during PET extrusion processes.

Claim 24 is rejected under 35 U.S.C. 103(a) as being unpatentable over Tanaka et al. (US 6,409,949) in view of either of Scarlett (US 2,823,421) or Ishikawa (US 5,176,861) and either of Bentivoglio (US 6,153,093) or Rosato (Extrusion Processing) and in view of Hills (US 4,849,113), as applied to claims 16-18, 21-23, 25, 28 and 29 above, and further in view of VanBuskirk et al. (US 5,281,676).

Regarding claim 24, Tanaka et al. teach feeding at least one chain-lengthening substance as set forth above, but do not explicitly teach the chain-lengthening substance is a lactam or oxazole derivative. However, VanBuskirk et al., teach processing PET with lactam derivatives as the chain-lengthening substances (col. 3, lines 24-31; col. 4, lines 31-52).

Therefore it would have been *prima facie* obvious to one having ordinary skill at the time of the claimed invention to have employed the lactam derivative chain lengthening agent taught by VanBuskirk et al. in the method of Tanaka et al. because, as taught by VanBuskirk et al., lactam derivatives are well-suited for use as chain lengthening substances in PET applications and do not result in any undesired toxic byproducts such as phenol comprising compounds (col. 4, lines 46-52).

Claims 26 and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tanaka et al. (US 6,409,949) in view of either of Scarlett (US 2,823,421) or Ishikawa (US 5,176,861) and either of Bentivoglio (US 6,153,093) or Rosato (Extrusion Processing) and in view of Hills (US 4,849,113), as applied to claims 16-19, 22, 23, 25, 28 and 29 above, and further in view of Strobel et al. (US 6,585,920).

As to claims 26 and 27, the combination teaches the method as set forth above wherein the cooling is performed with a cooling drum. However, Strobel discloses that cooling drums and water baths are art recognized equivalent means for cooling extruded films (col. 6, lines 51-57).

Therefore it would have been *prima facie* obvious to one having ordinary skill in the art at the time of the claimed invention to have employed an art recognized equivalent method of cooling, such as a water bath, as suggested by Strobel in the combined method since it has been held that employing art recognized equivalents suitable for the same purpose is *prima facie* obvious.

Response to Arguments

Applicant's arguments filed May 16, 2007 have been considered, but are moot in view of the new grounds of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeff Wollschlager whose telephone number is 571-272-8937. The examiner can normally be reached on Monday - Thursday 7:00 - 4:45, alternating Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christina Johnson can be reached on 571-272-1176. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JW

Jeff Wollschlager
Examiner
Art Unit 1732

August 22, 2007


CHRISTINA JOHNSON
SUPERVISORY PATENT EXAMINER